Listing of the Claims:

The status of the claims is listed below. No amendments are being made with this reply.

1. (Original) A device comprising a solid porous support having first and second surfaces, said first surface comprising an agent and/or condition delineating behavioural and/or physical barriers for motile living organisms, and, where behavioural, said barriers adapted for sensing by said living organisms and hence forcing said living organisms to remain localized within a predefined region of said support without said motile living organisms being physically immobilized on said support, wherein said barriers are printed on the first surface of said porous support so that it is drawn into the porous support and as such, completely or in part comprised within the pores of the porous support, therewith forming a three-dimensional compartmentalization of the porous support.

2. (Original) A device according to claim 1, wherein said agent is mixed with a permanent compound or wherein said condition is localized within a permanent compound, said permanent compound being printed or placed on said first surface and constituting a behavioural and/or physical barrier.

3. (Original) A device according to claim 2, wherein said permanent compound is a polymeric material containing at least one of the following: latex, rubber, plastic, resin, glue, protein or polypeptide or carbohydrate.

4. (Original) A device according to claim 2, wherein said permanent compound is a non-polymeric material.

5. (Previously presented) A device according to claim 2, wherein said physical barrier is substantially flat.

6. (Previously presented) A device according to claim 1, wherein said agent is a repellent, further characterized in that said agent is comprised within said barriers surrounding said predefined region wherein said organism needs to remain.

7. (Previously presented) A device according to claim 6, wherein said agent is chosen from the group consisting of hormones, detergents, amino acids, peptides, proteins, lipids organic compounds, aromatic compounds, salts, metabolites, waste compounds, cyclic nucleotides, anions, cations, hydroxyl ions, acid, carbonate ions, extracts from pathogens, plant extracts, insect extracts, nematode extracts and microbial extracts.

8. (Previously presented) A device according to claim 1, wherein said agent is an attractant further characterized in that said agent is comprised within the predefined region wherein said organism needs to remain.

9. (Previously presented) A device according to claim 8, wherein said agent is chosen from the group consisting of hormones, pheromones, detergents, nutrients, prey organisms or extracts thereof, amino acids, peptides, proteins, lipids organic compounds, aromatic compounds, salts, metabolites, waste compounds, cyclic nucleotides, anions, cations, hydroxyl ions, acid, carbonate ions, plant extracts, insect extracts, nematode extracts and microbial extracts.

10. (Previously presented) A device according to claim 1, wherein said permanent compound and/or agent changes the texture of the first surface of said solid support.

11. (Original) A device according to claim 10, wherein said agent or permanent compound is a lubricant.

12. (Previously presented) A device according to claim 1, wherein said condition is an energy source selected from the group consisting of sources providing an electric field, a magnetic field, ultrasonic waves, high energy waves, laser beams; or sources of thermal energy providing heat or cold; and sources of radiation; or a combination of at least two of such energy sources.

13. (Previously presented) A device according to claim 1, wherein the surface of said porous support supports growth and/or breeding of the living organisms.

14. (Previously presented) A device according to claim 1, wherein said porous support is non-invasive.

15. (Previously presented) A device according to claim 1, wherein said behavioural barrier delineates test areas or test arrays on and/or within the solid porous support.

16. (Previously presented) A device according to claim 1, further characterized in that said solid porous support comprises at least one effecter molecule.

17. (Original) A device according to claim 16, wherein said at least one effecter molecule is printed on the porous support.

18. (Previously presented) A device according to claim 16, wherein said at least one effecter molecule is comprised within the pores of the porous support.

19. (Previously presented) A device according to claim 16, wherein said at least one effecter molecule is comprised within the predefined regions of the porous support.

20. (Previously presented) The device according to claim 1, further characterized in that the first surface is coated with poly-L-lysine.

21. (Previously presented) A device according to claim 17, wherein said effecter molecule is chosen from the group consisting of nutrients, enzyme substrates, test compounds, inducer molecules, chaperone proteins, hormones, oligopeptides, nucleic acids, agonists, antagonists, inhibitors of cellular functions, enhancers of cellular functions, transcription factors, growth factors, differentiation-inducing agents, secondary metabolites, toxins, glycolipids, carbohydrates, antibiotics, mutagens, drugs, proteins, antibodies, antibody fragments, and drugs selected from a chemical or natural drug candidate library, or modified analogues of any of said molecules, or any combination of said molecules.

22. (Previously presented) A device according to claim 1, further characterized in that said solid porous support comprises nutrient molecules and/or other compounds designed to maintain the organism in an appropriate state.

23. (Original) A device according to claim 22, wherein said nutrient molecules and/or other compounds are printed onto the porous support.

24. (Original) A device according to claim 23, wherein said nutrient molecules or said other compounds are comprised within the pores of the porous support.

25. (Previously presented) The device according to claim 1, wherein said solid support is a metal oxide solid support.

26. (Previously presented) The device according to claim 1, wherein said solid support is an aluminium oxide solid support.

27. (Previously presented) A device according to claim 1, wherein said support is a flow-through solid support.

28. (Original) A device according to claim 27, further comprising a supply chamber in contact with the second surface of said solid support.

29. (Previously presented) The device according to claim 28, wherein said supply chamber comprises at least one compartment.

30. (Original) The device according to claim 29, wherein said at least one compartment is provided with a liquid medium comprising at least one effecter molecule.

31. (Previously presented) The device according to claim 29, wherein said at least one compartment is provided with a liquid medium comprising a gradient of at least one effecter molecule.

32. (Previously presented) The device according to claim 29, wherein said at least one compartment is provided with a liquid medium comprising a 2D gradient of at least two effecter molecules.

33. (Previously presented) The device according to claim 29, wherein the number of compartments of said supply chamber and the number of predefined regions on the first surface are equal.

34. (Previously presented) The device according to claim 30, wherein said effecter molecule is chosen from the group consisting of nutrients, enzyme substrates, test compounds, inducer molecules, chaperone proteins, hormones, oligopeptides, nucleic acids, agonists, antagonists, inhibitors of cellular functions, enhancers of cellular functions, transcription factors, growth factors, differentiation-inducing agents, secondary metabolites, toxins, glycolipids, carbohydrates, antibiotics, mutagens, drugs, proteins, antibodies, antibody fragments, and drugs selected from a chemical or natural drug candidate library, or modified analogues of any of said molecules, or any combination of said molecules.

35. (Previously presented) The device according to claim 28, wherein said supply chamber is in liquid contact with said second surface of said solid support.

36. (Previously presented) The device according to claim 30, wherein the said at least one effecter molecule is transported passively or actively through said porous support.

37. (Previously presented) The device according to claim 30, wherein said at least one effecter molecule diffuses through said porous support to the cellular components by contact force.

38. (Previously presented) The device according to claim 30, wherein said at least one effecter molecule is transported actively through said porous support by pumping, magnetically, electrically, or by piezo- electronic force.

39. (Previously presented) The device according to claim 1, further comprising at least one living organism chosen from the group comprising nematodes, *Dictyostelium discoideum*, colonial gliding bacteria, *Myxobacter xanthus*, bacteria capable

of moving over solid surfaces, *Drosophila melanogaster* and other insects assuming that any ability to jump or fly is disabled if normally present, wingless mutants of Drosophila, slime moulds, protozoa, amoeba, tissue culture cells capable of migration derived from larger organisms, motile spores and gametes.

40. (Withdrawn) A method for producing a device of claim 1 comprising:

- printing or placing an agent and/or a condition on the first surface of the porous support delineating behavioural and/or physical barriers, wherein said barriers are printed on the first surface of the porous support so that it is drawn into the porous support and as such, completely or in part comprised within the pores of the porous support, therewith forming a three-dimensional compartmentalization of the porous support, wherein said agent and/or a condition is optionally mixed with a permanent compound,
- optionally printing or placing effecter compounds on the first surface,
- optionally printing or placing nutrient sources on the first surface,
- optionally inoculating the device with living organisms,
- optionally contacting the second surface with a supply chamber for effecter molecules, and/or
- optionally contacting the second surface with a supply chamber for nutrients.

41. (Withdrawn) A method for sensing behaviour and/or motility of motile living organisms in a: multiplexed/microarray format comprising:

- providing a device according to claim 1,
- inoculating the device with living organisms, and

- detecting and/or identifying and/or characterizing a phenotypic or behavioural change, or change in activity in said organism and/or in the offspring of the organism.

42. (Withdrawn) A method for screening test/effector molecules which affect behaviour and/or motility and/or health of a motile living organism in a multiplexed/microarray format comprising:

- providing a device according to claim 1,
- inoculating the device with living organisms, and
- detecting and/or identifying and/or characterizing a phenotypic, behavioural or biochemical change induced by said test/effector molecules in said organism and/or in the offspring of the organism.

43. (Withdrawn) A method for screening test/effector molecules which affect behaviour and/or motility and/or health of a motile living organism in a multiplexed/microarray format comprising:

- providing a device according to claim 1,
- inoculating the device with living organisms,
- delivering at least one effecter from above the support by a means chosen from the group consisting of a delivery mask, a microfluidics device, a high precision x-y-z micro-pipettor, inkjet printer, and manual handling, and
- detecting and/or identifying and/or characterizing a phenotypic, behavioural or biochemical change induced by said test/Effector molecules in said organism and/or in the offspring of the organism.

44. (Withdrawn) The method according to claim 41, wherein said motile living organisms are selected from the group consisting of nematodes,

Diclyostelium discoideum, colonial gliding bacteria, *Myxobacter xanthus*, bacteria capable of moving over solid surfaces, *Drosophila melanogaster*, and other insects assuming that any ability to jump or fly is disabled if normally present, wingless mutants of Drosophila, slime moulds, protozoa, amoeba, tissue culture cells capable of migration derived from larger organisms, motile spores and gametes.

45. (Withdrawn) The method according to claim 42, wherein said (motile) living organisms are fluorescently or luminescently labelled, labelled with small radio transmitters or radioactive tags or wherein said organisms are coloured or labelled enabling thermal tracking.

46. (Withdrawn) The method according to claim 45, wherein the living organisms within one predefined region are differentially labelled, coloured or coded.

47. (Withdrawn) The method according to claim 42, wherein said detection and/or identification and/or characterization is performed in real-time.

48. (Withdrawn) The method according to claim 42, wherein said detection and/or identification and/or characterization is performed in an end-point format.

49. (Withdrawn) A method according to claim 42, wherein said detection and/or identification and/or characterization of phenotypic, behavioural or biochemical changes or change in organism number is performed by a method chosen from the group consisting of light microscopy, electron microscopy, luminescence, fluorescence.

50-53. (Canceled)

54. (Withdrawn) A kit comprising a device according to claim 1.

55-56. (Canceled)